

CLAIMS

1. A propylene polymer composition comprising the following components:
 - a) from 50% to 90% by weight of a propylene homopolymer or a propylene copolymer containing up to 5% by mol of derived units of C₂-C₂₀ alpha-olefins, having the following features:
 - (i) a polydispersity index PI>3;
 - (ii) melt flow rate (MFR), as measured at 230°C under a load of 2.16 kg, MFR>1 dg/min; and
 - (iii) fraction soluble in xylene at 25°C (XSRT)>1%
 - b) from 5% to 25% by weight a copolymer of ethylene and one or more derived units of C₄-C₂₀ alpha-olefins having the following features:
 - (i) content of ethylene derived units higher than 50% by mol and lower than 92% by mol;
 - (ii) intrinsic viscosity (IV) higher than 1.2 dL/g and lower than 6 dL/g;
 - (iii) density ranging from 0.850 to 0.890 g/cm³; and
 - (iv) a crystallinity content, expressed as the enthalpy of fusion, lower than 62 J/g
 - c) from 5% to 25% by weight of a copolymer of propylene and ethylene having the following features:
 - (i) content of propylene derived units higher than 50% by mol and lower than 92% by mol;
 - (ii) intrinsic viscosity (IV) higher than 2 dL/g and lower than 6 dL/g;
 - (iii) density ranging from 0.850 to 0.890 g/cm³;
 - (iv) the value of the product of reactivity ratios r₁ xr₂ lower than 2; and
 - (v) a crystallinity content, expressed as the enthalpy of fusion, lower than 45 J/g

wherein the weight ratio between the ethylene copolymer (component b) and the sum of component b) and component c) is equal to or higher than 0.5 and less than or equal to 0.9.

2. The propylene polymer composition according to claim 1 wherein component a) is further characterized in that 2,1 regioerrors are not detectable in a ¹³C NMR spectrum recorded at a 300 MHz instrument.

3. The propylene polymer composition according to claim 1 wherein component b) is further characterized in that the value of the product of reactivity ratios $r_1 \times r_2$ is lower than 5.
4. The propylene polymer composition according to claim 1 wherein the content of component a) ranges from 50% to 80% by weight; the content of component b) ranges from 25% to 9% by weight and the content of component c) ranges from 25% to 11% by weight.
5. The propylene polymer composition according to claim 1 wherein in component b) the content of derived units of alpha-olefins preferably ranges from 5% to 40% by mol.
6. The propylene polymer composition according to claim 1 wherein in component b) the intrinsic viscosity (IV) is higher than 1.25 dL/g and lower than 3.0 dL/g.
7. The propylene polymer composition according to claim 1 wherein in component b) the enthalpy of fusion is preferably lower than 50 J/g.
8. The propylene polymer composition according to claim 1 wherein in component b) the comonomer is 1-butene or 1-octene.
9. The propylene polymer composition according to claim 1 wherein in the component c) the content of propylene derived units preferably ranges from 50% to 80% by mol, and the content of ethylene derived ranges from 50% to 20% by mol.
10. The propylene polymer composition according to claim 1 wherein in the component c) the intrinsic viscosity is preferably higher than 2 dL/g and lower than 4 dL/g.
11. The propylene polymer composition according to claim 1 wherein in the component c) the value of the product of reactivity ratios $r_1 \times r_2$ is lower than 1.8.
12. The propylene polymer composition according to claim 1 wherein in the component c) the enthalpy of fusion is preferably lower than 35 J/g.
13. The propylene polymer composition according to claim 1 wherein component b) is obtained by polymerizing ethylene and one or more C₂-C₂₀ alpha olefins in the presence of a metallocene compound having at least one cyclopentadienyl moiety which is π -bonded to the central metal and component c) is obtained by polymerizing propylene and ethylene in the presence of a metallocene compound having at least one cyclopentadienyl moiety which is π -bonded to the central metal.